

REMARKS

This is a full and timely response to the Office Action mailed December 31, 2008 and Advisory Action mailed May 15, 2009, submitted concurrently with a Request for Continued Examination and a third month extension of time to extend the due date for response to June 30, 2009.

By this Amendment, claim 1 has been amended to incorporate the subject matter of claim 4. Further, new claims 18-20 have been added to further protect specific embodiments of the present invention. Thus, in view of the amendments to claim 1, claim 4 has been canceled without prejudice or disclaimer to its underlying subject matter, and claims 5 and 17 have been amended to depend on claim 1. Thus, claims 1, 3 and 5-20 are currently pending in this application. Support for the claim amendments can be readily found variously throughout the specification and the original claims, see in particular, paragraphs [0055] and [0056] of the present Patent Application Publication 2007/0114305 A1.

In view of these amendments, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

Obviousness-Type Double Patenting Rejection

Claims 1 and 3-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over the claims of copending U.S. Patent Application Nos. 10/588,758, 10/588,729, and 10/588,779. In accordance with the Examiner's comments in the Advisory Action dated May 15, 2009, Applicant has submitted herewith new terminal disclaimers for U.S. Patent Application Nos. 10/588,758, 10/588,729, and 10/588,779. Applicant wishes to note that the terminal disclaimer fees previously paid on October 9, 2008 can be applied to the presently submitted terminal disclaimers. Hence, no fees are being submitted relating to the new terminal disclaimers. Thus, withdrawal of these rejections is respectfully requested.

Rejection under 35 U.S.C. §103

Claims 1, 3-9, 12-14, and 16-17 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Coffee et al. (U.S. Patent No. 6,595,208). Applicant respectfully traverses this rejection.

To establish an obviousness rejection under 35 U.S.C. §103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should “*identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements*” in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385, 1396 (2007). Further, the Federal Circuit has stated that “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Still further, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. *See in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Finally, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.

As discussed in Applicant's previously filed remarks, the Examiner fails to establish a *prima facie* case of obviousness because the combined prior art fails to disclose or suggest all of the claim limitations. Claim 1 recites, *inter alia*:

wherein the device further comprises a field electrode surrounding the reservoir, said field electrode being connected to said high voltage generator for providing the entire liquid composition with more or less a common electric potential.

The prior art of record fails to teach or suggest at least these features of claim 1. The Examiner concedes that Jeffries et al. fails to teach this feature (see pages 5-6 of the final Office

Action), and relies on Coffee et al. to cure this deficiency in Jeffries et al. However, as previously explained in Applicant's remarks of April 30, 2009, the electrode 60 of Coffee et al. differs from the claimed field electrode in its spatial arrangement and function. More specifically, Coffee et al. discloses:

A further electrode 60 is positioned so as to be separated from the comminution site 40 by the discharge electrode 50. In the arrangement shown in FIG. 2, the discharge electrode 50 and further electrode 60 are concentrically disposed with respect to the comminution site so that the discharge electrode 50 surrounds the comminution site 40 and is in turn surrounded by the further electrode 60. The further electrode may extend as far as the outlet 4 of the housing. The further electrode 60 comprises a perforate electrically conductive or semiconductive body which may, effectively, form an inner wall of the second chamber 3b so as to bound a comminution chamber or area 3a (apparently 3b) of the device. For example the further electrode 60 may comprise a tube or cage of wire mesh. The wall 7 of the second chamber 3b is formed with one or more apertures 8 to allow air to enter the second chamber 3b. The apertures may be symmetrically disposed around the comminution site so as to facilitate a symmetrical air flow. The comminution sit [sic] 40, discharge electrode 50 and further electrode 60 are connected to respective voltage outputs 22, 23 and 24 of the voltage generator and control circuit 21 which is arranged to provide respective voltages so that the voltage applied to the further electrode 60 is intermediate the voltages applied to the comminution site 40 and the discharge electrode 50. In this example, the circuit 21 is arranged to supply a negative voltage to the comminution site 40, a positive voltage to the discharge electrode 50 and earth or ground potential to the further electrode 60. The further electrode 60 has the further advantage of shielding the comminution chamber 3a from external electromagnetic fields so that the electrical fields within the device are not detrimentally affected when, for example, the device is held by a user (see column 5, line 58 - column 6, line 23 of Coffee et al.) (emphasis added)

Coffee et al. also discloses:

As the user breaths in, air is entrained through the apertures 8 in the second chamber 3b and through the perforate further electrode 60 into the comminution chamber bounded by the further electrode 60. This general movement of air through the perforate electrode

60 hinders or inhibits charged liquid droplets or other charged comminution products from impacting on the electrode 60 (see column 6, line 66 - column 7, line 7, of Coffee et al.) (emphasis added)

As apparent from the above disclosure, the further electrode 60 is designed to be connected to a ground (*i.e., earth or ground potential*) and to have a different electric potential from the discharge electrode 50 (*i.e., the voltage applied to the further electrode 60 is intermediate the voltages applied to the comminution site 40 and the discharge electrode 50*) for the purpose of attracting the comminuted material away from the discharge site (*i.e., to bound and shield the comminution chamber 3a, thereby inhibiting comminution products from impacting the further electrode 60*). Thus, the discharge electrode 50 and further electrode 60 do not have a common electrical potential.

In addition, one of ordinary skill in the art would not be motivated to modify Coffee et al. so that the further electrode 60 has a common electrical potential with the discharge electrode 50. As noted above, the further electrode 60 is designed to be connected to a ground to have a different electric potential from discharge electrode for attracting the comminuted material away from the discharge site. If one skilled in the art were to modify the further electrode 60 to have a common electrical potential with the discharge electrode 50, such modification would render the invention of Coffee et al. unsatisfactory for its intended purpose or, at the very least, change the principle of operation of the invention of Coffee et al. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further, from a physical configuration point of view, the further electrode 60 may surround the discharge electrode 50, but does not surround the reservoir. The Examiner argues in the Advisory Action that "*the electrode is connected to the voltage generator via circuits shown at*

numeral 23 of figure 2 which does surround the reservoir". However, Applicant strongly disagrees with the Examiner's interpretation in this regard.

The numeral "23" is used to denote voltage output (see column 6, line 10-12, of Coffee et al.), or voltage supply line (column 6, line 61, of Coffee et al.), and does not denote the electrode surrounding the reservoir. As best understood from the disclosure of Coffee et al., the voltage output or supply line (23) is a cable or wire extending from the voltage generator and control circuit (21) to the discharge electrode (50) aside from the reservoir (45), and is therefore not intended to realize the electrode as an active element in relation to the reservoir.

Thus, because Coffee et al. does not teach a field electrode *surrounding the reservoir* and connected to a high voltage generator for providing the entire liquid composition with more or less *a common electric potential*, Coffee et al. fails to cure the deficiency of Jeffries et al.

Second, the Examiner has failed to establish a *prima facie* case of obviousness because one of ordinary skill in the art would not have been prompted to combine the prior art elements in the manner claimed. Jeffries et al. relates to an electrostatic sprayer that is configured to provide a flow of liquid over a certain length of time (see column 4, line 60, to column 5, line 3, of Jeffries et al.). Coffee et al., on the other hand, is clearly not for the continuous spray of liquid (see Figure 3b, 6a, and 7 of Coffee et al.). The Examiner states, "*Applicant's argument that Coffee does not provide for a continuous spray is tenuous at best as one can ascertain with the text Applicant has quoted that if the action of the lever is continuous so then will the spray be continuous*" (see page 11 of the Office Action). Coffee et al., however, discloses, "The user first primes the device by rotating the lever 74 in its slot 75 in the direction of the arrow A in FIG. 6b and against the biasing force of the coil spring 73 so winding up the coil spring" (see column 10, lines 27-31 of Coffee et al.), and "the user then depresses a button (not shown) to release the engagement between the detent 76 and the lever 74 allowing the coil spring 73 to twist the threaded shaft of the piston rod 70 through a set angle at a set so that the cooperation between the piston rod 70 and nut 49 causes the piston 47b to move through the syringe 47 so that *a metered amount of liquid* is supplied at a steady rate from the syringe to the liquid supply pipe 33 (see column 10, lines 46-53 of Coffee et al.). Thus, only a metered amount of liquid can be discharged without once again priming the device. As

such, the Examiner's reasoning is flawed, and Coffee et al. cannot be said to disclose continuous spray of a liquid.

Also, the delivery system of Jeffries et al. relies on physical positive pressure applied to the flexible sachet containing the liquid. In contrast, the specific embodiments shown in FIG. 6a and FIG. 7 of Coffee et al. include pumps that are not in downstream relationship with the reservoir. Coffee et al. does depict a chamber in downstream relation with the reservoir (see Figure 2 of Coffee et al. and suggest a variety of pumps (see column 5, lines 16-33, of Coffee et al.), but Coffee et al. does not provide specific teachings regarding such embodiments. Hence, even if one skilled in the art were to employ the delivery system of Coffee et al. and apply it to Jeffries et al., one skilled in the art would employ the system of either FIG. 6a and FIG. 7 of Coffee et al., rather than a system that is not adequately described.

Therefore, even though the devices of Jeffries et al. and Coffee et al. are both in the field of electrostatic devices, their purpose and method of delivery are very different. As such, one of ordinary skill in the art would not have been prompted to combine the references in the manner claimed.

In addition, as noted in the previous responses, the Examiner is using hindsight to randomly select and combine the elements of the devices of Jeffries et al. and Coffee et al. The Examiner argues that "*Applicant's belief that the Examiner is using hindsight reasoning based off of Examiner's arguments is belayed by the fact that the Examiner didn't submit any arguments in the last office action, and in actuality the Examiner had called the Applicant's arguments in view of new grounds of rejection. Therefore any accusation of hindsight is dismissed by the Examiner*" (see page 11 of Office Action). The Examiner has no basis for dismissing this argument. In the rejection, the Examiner merely lists the elements of the present invention and locates such elements in Jeffries et al. and Coffee et al. without any regard as to whether one skilled in the art would be motivated to combine the elements in Jeffries et al. with the elements in Coffee et al. This is impermissible hindsight because the Examiner is relying on Applicant's own disclosure to establish his case of obviousness. Thus, the Examiner's conclusion of obviousness in this case is based on improper hindsight reasoning.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claim 1. Claims 3-9, 12-14, and 16-17 depend directly or indirectly from claim 1 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicant respectfully submits that independent claim 1, and all the claims that depend therefrom, are allowable.

Claims 10-11 and 15 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jeffries et al. (U.S. Patent No. 5,221,050) in view of Coffee et al. (U.S. Patent No. 6,595,208), and further in view of Hartle et al. (U.S. Patent No. 5,725,161). Applicant respectfully traverses this rejection.

Applicant respectfully submits that claim 1 is allowable over Jeffries et al. and Coffee et al., in combination with Hartle et al., which the Examiner has cited to teach a transformer, a housing provided with a button for releasing an inner cover therefrom and a switch knob for actuating a pump, and an outer cover provided to fit over the inner cover (see pages 10-11 of the Office Action). This is due to the fact that despite such teachings of Hartle et al., Hartle et al. still fails to cure the deficiencies of Jeffries et al. and Coffee et al. noted above with regard to claim 1. Hence, claims 10-11 and 15 are allowable at least because they depend from an allowable claim 1.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 10-11 and 15.

New Claims

New claims 18-20 are directed to additional aspects of the present invention that are not disclosed or suggested by the prior art of record. More specifically, new claims 18 and 19 have been presented to more particularly define the field electrode to distinguish it from the voltage supply line (23) of Coffee et al. In new claims 18 and 19, the field electrode (170) is in the form of a plate shaped to surround the reservoir (see new claim 18) and may optionally be composed of a first plate (171) and a second plate (172) both made of an electrically conductive metal and shaped

to define therebetween said concavity (12) surrounding the entire area of the reservoir (210) (see new dependent claim 19).

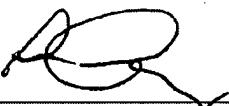
In addition, new claim 20 has been presented to more particularly define the housing as having a shape of a generally flat disc. Further, new claims 20 depends from claim 1 and includes all of the features of claim 1, which is allowable for the reasons noted above. Therefore, in view of such dependency, it is respectfully submitted that 20 is also allowable at least for the reason that independent claim 1 is allowable, as well as for the features it recites.

CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are believed to be clearly patentable over the outstanding rejections. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

Dated: June 30, 2009

Respectfully submitted,

By: 

Lee Cheng
Registration No.: 40,949
CHENG LAW GROUP PLLC
1100 17th Street, N.W.
Suite 503
Washington, DC 20036
(202) 530-1280
Attorney for Applicant

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 50-4422 for any such fees; and applicant(s) hereby petition for any needed extension of time.